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P.O. BOX 3001
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EXAMINER

RAO, ANAND SHASHIKANT

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MIHAELA VAN DER SCHAAAR and MAHESH
BALAKRISHNAN

Appeal 2008-0359
Application 09/998,361
Technology Center 2600

Decided: July 18, 2008

Before KENNETH W. HAIRSTON, CARLA M. KRIVAK, AND KEVIN
F. TURNER, *Administrative Patent Judges*.

KRIVAK, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from a final rejection of
claims 1-17.¹ We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

¹ Claims 1-25 were pending. Claims 18-25 were cancelled by the
Amendment of December 29, 2004. It should be noted that the Examiner
failed to list claim 10 in the headings of the rejection under 35 U.S.C.
§ 103(a) (Ans. 7) but referred to it in the body of the rejection. Thus, failure
to recite claim 10 is considered harmless error.

STATEMENT OF CASE

Appellants' claimed invention is a method and apparatus for decoding video signals, particularly, decoding spatial scaled fine granular encoded video signals (Spec. ¶[0003]).

Claim 1, reproduced below, is representative of the subject matter on appeal.

1. A method of decoding a video signal including a base layer stream and a plurality of enhancement layer streams, said method comprising the steps of:

decoding said base layer stream to produce base layer video frames;

decoding a first one of said enhancement layer streams to produce quality enhanced video frames;

combining said base layer video frames and at least portions of said quality enhanced video frames to produce a first video frame output;

upsampling said said first video frame output;

decoding a second one of said enhancement layer streams to produce spatially enhanced video frames;

combining said spatially enhanced video frames and said upsampled first video frame output to produce a second video frame output.

REFERENCES

Hamanaka

US 6,603,883 B1

Aug. 5, 2003

Filed Sep. 3, 1999

The Examiner rejected claims 1, 2, 6, 7, 11, and 12 under 35 U.S.C. § 102(e) as anticipated by Hamanaka. The Examiner also rejected claim 3-5, 7-10, and 13-17 under 35 U.S.C. § 103(a) as obvious over Hamanaka.

Appellants contend that Hamanaka does not teach or suggest every feature of the claimed invention (Br. 7).

ISSUES

Did the Examiner err in rejecting claims 1, 2, 6, 7, 11, and 12 under 35 U.S.C. § 102(e) as anticipated by Hamanaka?

Did the Examiner err in rejecting claims 3-5, 7-10, and 13-17 under 35 U.S.C. § 103(a) as obvious over Hamanaka?

FINDINGS OF FACT

1. Appellants' claimed invention decodes a transmitted spatially scalable fine granular scalability (FGS) signal having a low resolution base layer and at least one enhancement layer (Spec. ¶[0006]). The base layer is decoded and a quality enhancement is applied to the base layer. The combined base layer and quality layer video frames are upsampled to return the base layer and quality layer to the original image resolution. The upsampled image is then combined with decoded spatial enhancement layer information that fills in the resolution lacking in the upsampled base/quality layer image (Spec. ¶[0006]).

2. Hamanaka teaches an image processing apparatus that includes an encoder having at least two of spatial scalability (col. 7, l. 39-col. 8, l. 63), temporal scalability (col. 8, l. 64-col. 10, l. 19), and signal-to-noise (SNR) scalability (col. 10, ll. 20-64). A decoder is provided (Figs. 16, 17,

and 20-22). In the decoder of Hamanaka, the encoded image information is decoded “according to the decoding mode designated by the header information” (col. 15, ll. 61-63). Further, if the bit stream input to the decoder has been encoded using, for example, scalability, information about the scalability is transmitted with the header information. Both the base layer image and the enhancement layer image are reconstructed according to spatial or temporal scalability (col. 17, ll. 8-16).

PRINCIPLES OF LAW

Anticipation

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros., Inc. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). The inquiry as to whether a reference anticipates a claim must focus on what subject matter is encompassed by the claim and what subject matter is described by the reference. As set forth by the court in *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 772 (Fed. Cir. 1983), it is only necessary for the claims to “‘read on’ something disclosed in the reference, i.e., all limitations of the claim are found in the reference, or ‘fully met’ by it.” While all elements of the claimed invention must appear in a single reference, additional references may be used to interpret the anticipating reference and to shed light on its meaning, particularly to those skilled in the art at the relevant time. *See Studiengesellschaft Kohle m.b.H. v. Dart Indus., Inc.*, 726 F.2d 724, 726-27 (Fed. Cir. 1984).

Obviousness

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). “[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a prima facie case of unpatentability.” *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

ANALYSIS

Anticipation

We first consider the Examiner’s rejection of claims 1, 2, 6, 7, 11, and 12 under 35 U.S.C. § 102(e) over Hamanaka. As an initial matter, our decision is with respect to independent claim 1, which is representative of the claims. Turning to the rejection, the Examiner indicated how the claimed invention is deemed to be fully met by the disclosure of Hamanaka. Specifically, the Examiner contends that Hamanaka teaches decoding a video signal including a base layer stream and a plurality of enhancement layer streams comprising decoding the base layer to produce base layer video frames (Ans. 5), decoding a first at least one enhancement layer stream to produce quality enhance video frames (SNR enhancement layer restructure block) (Ans. 5); combining the base layer video frames and at least portions of the quality enhanced video frames to produce a first video frame output (col. 8, ll. 20-25) (Ans. 5); upscaling the first video frame output (col. 8, ll. 25-31) (Ans. 5); decoding a second one of the enhancement

layer streams to produce spatially enhanced video frames (col. 8, ll. 5-20) (Ans. 5); combining the spatially enhanced video frames and the upscaled first video frame output to produce a second output (col. 6, ll. 55-67; col. 7, ll. 1-7; col. 8, ll. 32-43) (Ans. 5). The Examiner further noted that “decoding a first least one of said first enhancement layer streams to produce quality enhanced video frames...is clearly associated with the **SNR enhancement layer restructure block** contained within element 210 and which only appears in figure 11” (Ans. 8). Additionally, although Hamanaka discusses mostly encoding, “deconstruction of said signals by decoding is only described as being the exact opposite of the encoding processing (Hamanaka: column 11, lines 40-50)” (Ans. 8).

Appellants counter that claim 1’s recitation of “quality enhanced video frames” is not the same as temporal enhancement layer frames as alleged by the Examiner (Br. 8). Further, the Examiner’s reliance on column 8, lines 20-25 of Hamanaka to show this is misplaced (Br. 8). We agree. Although Fig. 11 of Hamanaka shows an SNR enhancement layer restructure block, Hamanaka does not teach, either in any of the Figures or in the body of the application, combining base layer video frames and at least portions of the quality enhanced (SNR) video frames to produce a first video frame, upscaling the first video frame output, and combining spatially enhanced video frames and the upscaled first video frame output to produce a second video frame output, as recited in representative claim 1. Independent claims 6 and 11 also include these features.

Since Hamanaka does not teach all the features of claim 1, as set forth above, it is submitted that claim 1, along with claims 2, 6, 7, 11, and 12, is not anticipated by Hamanaka.

Obviousness

We next consider the Examiner's rejection of claims 3-5, 7-10, and 13-17 under 35 U.S.C. § 103(a) as obvious over Hamanaka. Claims 3-5, 7-10, and 13-17 depend from independent claims 1, 6, and 11. For the reasons set forth above, in which we found claims 1, 6, and 11 not anticipated by Hamanaka, we find that claims 3-5, 7-10, and 13-17 are not obvious over Hamanaka.

CONCLUSION

We therefore conclude that the Examiner erred in rejecting claims 1, 2, 6, 7, 11, and 12 under 35 U.S.C. § 102(e) and claims 3-5, 7-10, and 13-17 under 35 U.S.C. § 103(a).

DECISION

We reverse the decision of the Examiner rejecting claims 1-17.

REVERSED

gvw

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